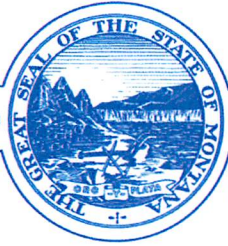


DEPARTMENT OF NATURAL RESOURCES  
AND CONSERVATION



BRIAN SCHWEITZER, GOVERNOR

1625 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-2074  
FAX: (406) 444-2684

PO BOX 201601  
HELENA, MONTANA 59620-1601

November 27, 2012

Futures Fisheries Review Panel  
Montana Fish, Wildlife & Parks  
P.O. Box 200701  
Helena, MT 59620-0701

RE: Future Fisheries grant proposal for the South Woodward Creek bridge reconstruction project.

Dear Review Panel,

The Montana Department of Natural Resources and Conservation (DNRC) is pleased to support The Trust for Public Land's (TPL) bridge reconstruction project on South Woodward Creek. This is an important project on land TPL currently owns but is in the process of transferring to DNRC and the Swan River State Forest as part of the Montana Legacy Project. Lands within the Swan River State Forest are entrusted to Montana School Trust beneficiaries and managed on their behalf by DNRC.

South Woodward Creek is a major bull trout spawning and rearing stream in the Swan River Valley, which supports one of the last bull trout strongholds in Upper Columbia River drainage. The South Woodward Creek bridge exhibits concrete abutments that are failing and at high risk of mass wasting and consequent delivery of fine sediments to the stream. Failure of the bridge structure would certainly have adverse impacts on important downstream bull trout spawning and rearing habitats. Reconstructing the bridge will eliminate this risk.

Restoration projects like this compliment investments made by DNRC, TPL, The Nature Conservancy, Montana Fish, Wildlife & Parks and many other organizations working in the Swan River Valley to preserve native species biodiversity and working forests. Furthermore, DNRC is a signatory to the 2000 Restoration Plan for Bull Trout in the Clark Fork River Basin and Kootenai River Basin, Montana, and collaborative efforts such as this remain critical to the cooperative spirit of the agreement. As a landowner in the Swan River Valley, we fully support TPL's efforts and reconstruction proposal to mitigate the significant, foreseeable impacts at this bridge site.

Please feel free to contact Jim Bower at 542-4232 or [jbower@mt.gov](mailto:jbower@mt.gov) if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mary Sexton".

Mary Sexton  
Director

November 19, 2011

Officers of the Corporation:

Chair Neil Meyer

Vice Chair Russ Abolt

Treasurer Steve Ellis

President/Secretary  
Anne Dahl

Deborah Love  
Northern Rockies Director  
The Trust for Public Land  
111 South Grand Avenue, Suite 204  
Bozeman, MT 59715

Dear Deb:

Board of Directors:

Russ Abolt

Kvande Anderson

Steve Ellis

Pam Hamilton

Dave Johnson

Joan McGuire

Neil Meyer

Bill Moore

Jerye Motschman

Gene Tingle

This letter is in support of your Future Fisheries grant proposal to repair/replace the South Woodward Creek Bridge on former Plum Creek Timber Company land in the Swan Valley. The bridge is failing. If not repaired or replaced, it will eventually spill sediments into the creek. South Woodward Creek provides critical habitat for bull trout in the Swan Valley. Mass failure would smother vital bull trout spawning beds.

We are grateful to The Trust for Public Land for taking the lead in resolving this problem. We appreciate TPL's willingness to work with partners. This includes cooperating with the Swan River State Forest and coordinating efforts with the Swan Valley's Water Quality Technical Advisory Group (TAG). The TAG is a consortium of interests, including Montana DEQ and Swan Ecosystem Center, working together to implement the recommendations of DEQ's 2004 *Water Quality Protection Plan and TMDL for the Swan Lake Watershed*. The South Woodward Creek bridge project will help the TAG meet the TMDL goal of reducing sediment flowing to Swan Lake.

Advisory Board:

Lex Blood

Jim Burchfield

Congratulations on raising half the necessary funds to repair/replace the bridge over South Woodward Creek. We hope Future Fisheries will provide the remaining \$30,000 needed for this very worthy project.

Many Valued  
Volunteers

Sincerely,



Anne Dahl, president



## ***Montana Fish, Wildlife & Parks***

Region One  
490 N. Meridian Road  
Kalispell, MT 59901-3854  
Leo: (406) 751-4548  
Fax: (406) 257-0349  
November 20, 2012

To whom it may concern:

I am writing this letter in support of a project being submitted to Future Fisheries from The Nature Conservancy. The purpose of the project is to replace a failing bridge structure on Woodward Creek, a tributary of the Swan River in northwest Montana. In its current state, the bridge abutments are failing and many cubic yards of fill material are poised to be released into the creek. All bull trout spawning habitat in Woodward Creek is located downstream of this bridge. Woodward Creek contains important spawning and rearing habitat for the Swan Lake bull trout population and routinely accounts for 30+ bull trout redds (spawning beds). Increases in sediment resulting from these failing abutments would likely be detrimental to the bull trout population. This project would mitigate for these effects and would ensure the persistence of quality habitat in this important stream. Please accept this letter as my formal support for this project. If you have any questions regarding this project or need any additional information please feel free to contact me at the numbers listed above. Thanks.

Sincerely,

Leo Rosenthal  
Fisheries Biologist



The Nature Conservancy in Montana  
32 South Ewing Street, Suite 215  
Helena, MT 59601

Tel (406) 443-0303  
Fax (406) 443-8311

[nature.org/montana](http://nature.org/montana)

November 20, 2012

Futures Fisheries Review Panel  
Montana Fish, Wildlife & Parks  
P.O. Box 200701  
Helena, MT 59620-0701

Dear Review Panel,

The Nature Conservancy in Montana is pleased to support The Trust for Public Land's bridge replacement project on South Woodward Creek. Through the Montana Legacy Project, The Nature Conservancy purchased this parcel on Woodward Creek and Montana Department of Fish, Wildlife & Parks purchased a conservation easement. Eventually we will transfer the fee to the Department of Natural Resources and Conservation (DNRC).

South Woodward Creek is an important bull trout spawning stream in the Swan Valley. A catastrophic failure of the bridge would undoubtedly impact bull trout spawning downstream. Replacing this bridge will eliminate the risk of sediment increase into the creek as the result of bridge failure.

Restoration projects like this one compliment investments made by the Conservancy, DNRC, MFWP, TPL, and the many conservation organizations working in the Swan and Western Montana. As a landowner and conservation organization, we fully support the replacement of South Woodward Creek Bridge.

Sincerely,

Kat Imhoff  
Sate Director

# Memo

To: Lisa Bay  
From: Dan Roberson  
CC: Jim Bower; Kristen Baker  
Date: 11/29/2012  
Re: Fatwood Bridge Repair

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This memo is intended to describe why the bridge is failing and what proposed actions are needed to repair the bridge.

The Fatwood Bridge utilizes extremely tall precast concrete abutments and wing-walls to realize a shortened bridge span as it crosses South Woodward Creek. The wing-walls retain about a hundred of cubic yards of fill for the approaches to the bridge. The main issue with the Fatwood Bridge is that the abutments and wing-walls are failing. Abutment and wing-wall joints are separating and precast concrete wing-walls are being distorted and cracking due to extreme fill pressure. Dead-man steel rods intended to help keep the wing-walls in place have failed by pulling through the concrete or the rods themselves have broken off (see photos below).



The reason for this failure is that very poor fill material was used. The material retains high amounts of moisture and it is incapable of being bound together. The condition of the fill was exacerbated by installing it during a time of wet conditions (late fall) and using poor compaction techniques. This has caused excessive settling with extreme contraction and expansion during temperature change. This has caused an inordinate amount of pressure to be exerted on the abutments and wing-walls over time. If the abutments or wing-walls fail the bridge will collapse and the fill behind them will contribute large amounts of sediment into the creek.

Proposed repairs will require that the existing fill behind the abutments be removed on both sides of the bridge. That the abutments and wing-walls be reset and aligned. Proper fill material with low moisture content and good drainage should only be used behind the abutments. The fill material should be properly compacted and bound together with layers of filter-fabric. Abutment and wing-wall dead-men reinforcing steel should be repaired and reinstalled.